



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/697,901	10/29/2003	Cesar H. Proano	005513.P015	9235

7590 01/17/2008  
Daniel E. Ovanezian  
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP  
Seventh Floor  
12400 Wilshire Boulevard  
Los Angeles, CA 90025-1026

EXAMINER
----------

RAHMJOO, MANUCHER

ART UNIT	PAPER NUMBER
----------	--------------

2624

MAIL DATE	DELIVERY MODE
-----------	---------------

01/17/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/697,901	PROANO ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Mike Rahmjoo	2624	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 November 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1- 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Bir et al (US Patent 6108438), hereinafter, Bird.

As per claim 1 Bird teaches an insulator having a bottom surface corresponding to for example fig. 3 the bottom surface of block 25;

a pixel array coupled to the insulator corresponding to for example fig. 3 pixel array 33 coupled to the bottom surface of the insulator;

a conductive structure adjacent to the pixel array, the conductive structure exposed for physical contact with a body part of a user (e.g., col. 6 lines 6- 10 wherein physical contact with the surface 26 corresponding to conductive structure and individual finger portions at finger surface 37 corresponding to body part is made). The basis of having said conductive layer (i.e., fig. 3 layer 25) along with array of sense elements (i.e., fig. 3 sense elements 12) is to provide means for producing fingerprint images. The apparatus of Bird performs the very same function which is contact of the fingerprint ridges made with the conductive layer as further outlined in col. 6 lines 23- 31 to obtain three dimensional profile of the fingerprint. Said functionality is further

obviated by comparing the fig. 1 of applicant with fig. 3 of Bird which depicts the similarities thereof. A one to one comparison of the drawings would produce as follows: finger 110 of applicant as body part equivalent of fingerprint 36 of Bird; insulator 120 of applicant as equivalent of insulating layer 25 of Bird; electrodes 130, 132, 134 of applicant as equivalent of electrodes 33 of Bird; the sensing circuit 180 as equivalent of the sensing circuit of fig. 2 of Bird; Substrate 160 (providing support) of applicant as equivalent of insulator 15 of Bird.

Column 9 lines 52- 55 also teaches strips of conductive material (corresponding to conductive structure) which may be provided directly on the upper surface of the insulating layer 25 of the device;

Bird is deplete with teachings of a first signal generator coupled to the conductive structure, wherein the first signal generator is operable to drive a charge through the conductive structure to the body part see for example column 6 line 51 (i.e., potential applied); column 6 line 45- 50 (i.e., pulse generating circuit to drive to potential levels); column 8 line 55 (i.e., signal applied); column 9 line 47 (i.e., application of voltage pulses). The basic and well known requirement of such a device as in Bird is to drive a charge to levels other than virtual earth voltage through a medium (i.e., a conductive medium) to the body to attain a fingerprint image as described in the background of Bird in column 1 lines 25- 35. It is therefore obviated that lack of said charge or a signal would produce no images. Said feature as *admitted by applicant* in [0036] is well known in the art.

As per claim 2 Bird teaches the pixel array comprises amorphous silicon (a-Si) transistors corresponding to for example column 5 line 35.

As per claim 3 Bird teaches the a-Si pixel array is the basis for a thin film transistor ("TFT") fiat panel detector corresponding to for example column 10 line 10.

As per claim 4 Bird teaches the conductive structure is configured to reside underneath a contacting portion of a hand corresponding to for example insulating layer/ dielectric film 25 of fig. 3.

As per claim 5 and in light of the rejection of claim 1, Bird teaches the first signal generator is configured to drive the charge through the body part to the insulator corresponding to for example fig. 2 which depicts the pulses (corresponding to the charges) being applied to the sensing circuit which is essentially made through body part (i.e., fingerprint 36 of fig. 3) and the insulating layer 25 of fig. 3.

As per claim 6 Bird teaches the first signal generator generates a pulse corresponding to for example column 6 lines 47 wherein a pulse is generated.

As per claim 7 Bird teaches the pulse has a negative potential corresponding to for example column 7 line 24 through the application of negative voltage pulse.

As per claim 8 Bird teaches the first signal generator generates a signal that changes its voltage amplitude corresponding to for example column 7 lines 40- 45 wherein there crosstalk of the voltages due to residual charging current which results into a change in the voltage amplitude of the first signal.

As per claim 9 Bird teaches a plurality of electrodes coupled to the insulator corresponding to for example fig. 3 blocks 33;

and a plurality of storage capacitors, each of the plurality of storage capacitors coupled to a corresponding one of the plurality of electrodes corresponding to for example fig. 3 blocks 35;

and a second signal generator coupled to the plurality of storage capacitors on a side opposite that of the plurality of electrodes corresponding to for example fig. 2- 7 and column 6 line 46 wherein each amplifier is connected to a pulse generation circuit within the sense circuit and column 10 lines 30- 35 wherein the array is driven by plurality of pulse signals.

As per claim 10 Bird teaches the second signal generator is configured to drive a charge directly into the plurality of storage capacitors through the side opposite that of the plurality of electrodes corresponding to for example column 10 lines 30- 35 wherein the array is driven by plurality of pulse signals including a first positive pulse and a negative pulse signal broadly corresponding to the voltages applied via the same and opposite side to that of the plurality of electrodes.

As per claim 11 Bird teaches the second signal generator generates a pulse corresponding to for example column 10 lines 30- 35 wherein the array is driven by plurality of pulse signals as corresponding to multiple or second signal generator.

As per claim 12 Bird teaches the pulse has a negative potential corresponding to for example column 10 line 33.

As per claim 13 Bird teaches the second signal generator is configured to drive a first charge through the side opposite that of the plurality of electrodes into the plurality of storage capacitors, and wherein the first signal generator is coupled to the

conductive structure to drive a second charge through the insulator corresponding to for example column 9 lines 45- 50 wherein the voltage pulses applied to the column conductors 20 could be provided by a separate circuit connected to the column conductors, for example at their ends remote from the column amplifiers 40, rather than via the amplifiers and also column 10 lines 10- 35 for the positive and negative selection pulses as corresponding to the first and second generation pulses.

As per claim 14 Bird teaches the conductive structure surrounds the pixel array corresponding to for example fig. 1 blocks 18 and 20.

As per claim 15 Bird teaches fingerprint recognition system comprising the apparatus according to claim 1 corresponding to for example the title and device of fig.1.

As per claim 16 and in light of the rejections made above Bird teaches a plurality of storage capacitors, each of the plurality of storage capacitors coupled to a corresponding one of the plurality of electrodes corresponding to for example fig. 3 and 5 and cap. 35 and 51;

driving a first charge through the finger into at least one of the plurality of storage capacitors corresponding to for example fig. 3 and 7 and column 10 lines 10- 35 for any of the positive and negative pulse signals as corresponding to first charge.

As per claim 17 Bird teaches the first charge is driven through the finger using a first pulse corresponding to for example column 6 lines 5-35 wherein the diodes are used to charge and discharge the capacitance formed between the finger portion and the sense electrode.

As per claim 18 Bird teaches the first pulse has a negative voltage corresponding to for example column 10 lines 10- 35 for the positive and negative selection pulses as corresponding to the first and second generation pulses.

As per claim 19 Bird teaches the first charge is driven into a first contact of the storage capacitor coupled to a corresponding electrode corresponding to for example fig. 3 capacitors 35 and the corresponding electrodes.

As per claim 20 Bird teaches driving a second charge into a second contact of the storage capacitor corresponding to for example fig. 3, 5 and 7 and column 10 lines 10- 35 for the positive and negative selection pulses as corresponding to the first and second generation pulses.

As per claim 21 Bird teaches the second charge is driven directly into the storage capacitor using a pulse corresponding to for example columns 7 and 10 lines 10- 35 for the positive and negative selection pulses as corresponding to the first and second generation pulses.

As per claim 22 Bird teaches the pulse has a negative voltage corresponding to for example column 10 lines 10- 35 for the negative selection pulses as corresponding to the first or second generation pulses.

As per claim 23 Bird teaches driving a second charge into a second contact of the storage capacitor, wherein the second charge is driven directly into the storage capacitor using a second pulse corresponding to for example column 10 lines 10- 35 for the positive and negative selection pulses as corresponding to the first and second generation pulses which is made through capacitors 35.



As per claim 24 Bird teaches the first pulse has a positive voltage column 10 lines 10- 35 for the positive selection pulses as corresponding to the first or second generation pulses.

As per claim 25 Bird teaches the first pulse has a voltage difference in the approximate range of 0.5V to IV corresponding to for example column 8 lines 5- 67 through column 9 lines 1- 37 wherein the charge or voltage difference is about 1 volt (or higher) which is in accordance with applicant's disclosure in [0034].

Claims 26- 27 are substantially similar to claims 1- 24 and are rejected using the same rational.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1- 27 have been considered but are moot in view of the new ground of rejection.

Upon further consideration, a new ground of rejection is made in view of the newly added limitations. Said new grounds of rejection is made in light of the primary art made of record but to different portions and interpretation from said prior art.

### Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mike Rahmjoo whose telephone number is 571-272-7789. The examiner can normally be reached on 8 AM- 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matt Bella can be reached on 571-272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mike Rahmjoo



January 08, 2008